

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims have been neither amended nor canceled. Claims 1-20 are pending and under consideration. Reconsideration is respectfully requested.

REJECTION OF CLAIM UNDER 102:

Claims 1-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,600,569 (Osada et al.). All rejections are respectfully traversed.

Claim 1 recites "storing intermediate data corresponding to a document to be printed; converting the intermediate data into printing data; determining whether an error has occurred while the intermediate data is converted into the printing data; and in response to determining that an error has occurred, converting the intermediate data into image type data and converting the image type data into the printing data..."

further, claim 1 has amended to recite "the intermediate data being Graphic Device Interface(GDI) function in a single enhancement meta file(EMF)."

Osada et al. merely discusses "[t]his apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)."(col. 20, lines 34-46, emphasis added).

Osada et al. does not disclose "the intermediate data being Graphic Device Interface(GDI) function in a single enhancement meta file(EMF)."

In addition, Osada et al. discusses "Error flag:"1" indicates that some error has occurred in the printing apparatus 110. This flag is added to a replay packet sent from the printing apparatus 110 to the host computer 109. Notification flag:"1" indicates that the printing apparatus 110 has information which it wants to notify the host computer 109 other than a reply to a request packet from the host computer 109."(col. 9, lines 59-66).

As noted above, Osada et al. discusses "Error flag" which indicates "that some error has occurred in the printing apparatus 110".

However, it is noted that the error flag is not related to “determining whether an error has occurred while the intermediate data is converted into the printing data” as recited in claim 1 of the present application.

Thus, Osada et al. fails to disclose “determining whether an error has occurred while the intermediate data is converted into the printing data” as recited in claim 1(emphasis added).

As such, it is respectfully submitted that Osada et al. fails to disclose the invention as recited in claim 1.

Claim 2 recites “...determining whether the intermediate data has been completely converted into the printing data.”

Osada et al. discusses “[t]his apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515).”(col. 20, lines 34-46).

As such, Osada et al. fails to disclose “determining whether the intermediate data has been completely converted into the printing data.”

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 2.

In addition, claim 3 is patentable due at least to its depending from claim 1, as well as for the additional recitations therein.

Claim 4 recites “wherein the error is a general protection fault type error.”

Osada et al. discusses “[e]rror flag:”1” indicates that some error has occurred in the printing apparatus 110. This flag is added to a replay packet sent from the printing apparatus 110 to the host computer 109.”(col. 9, lines 60-63).

As such, Osada et al. merely discloses error flag to send from a printing apparatus to the host computer.

However, Osada et al. fails to disclose “wherein the error is a general protection fault type error.”

As such, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 4.

Claim 5 has been amended to recite “wherein the intermediate data is being Graphic Device Interface(GDI) function in a single enhancement meta file(EMF).”

Osada et al. does not disclose “wherein the intermediate data is being Graphic Device Interface(GDI) function in a single enhancement meta file(EMF).”

Claim 5 recites “a control unit inspecting whether an error has occurred while the intermediate data is converted into the printing data, outputting a result of the inspection as the control signal, and in response to the control signal, loading the intermediate data from the storage unit and outputting the loaded intermediate data to the printer driver.”

Osada et al. discusses “In addition, the print data generated by the application unit 1401 of the host computer 109 is converted into PDL data by the printer driver unit 1402 and is transmitted to the printing apparatus 110 through the transmission buffer 1403 and the I/F driver unit 1404. When acquisition of information about the printing apparatus 110, setting of information, or job control is to be performed through the utility unit 1405 during data transmission, since exclusive control is performed by the I/F driver unit 1404, a request from the utility unit 1405 cannot be satisfied until the above PDL data is completely transmitted. This impairs the real-time performance.”(col. 4 lines 13-24).

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 5.

Claim 6 recites “wherein the control unit inspects whether the intermediate data has been completely converted into the printing data by the printer driver, and outputs a result of the inspection as a conversion signal to the printer driver.”

Osada et al. merely discusses “the rendering buffer 1513 temporarily stores a rendering object until it is actually printed. When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing.”(col. 12, lines 30-34).

It is unclear whether Osada et al. inspects the intermediate data has been completely converted into the printing data by the driver, and outputs a result of the inspection as a conversion signal to the printer driver” as recited in claim 6.

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 6.

Claim 7 recites “wherein the control unit comprises: an error inspector, which inspects whether an error has occurred while the intermediate data is converted into the printing data and outputs a result of the inspection as the control signal; and a data loader, which in response to the control signal, loads the intermediate data from the storage unit and outputs the loaded intermediate data to the printer driver.”

Osada et al. discusses "In addition, the print data generated by the application unit 1401 of the host computer 109 is converted into PDL data by the printer driver unit 1402 and is transmitted to the printing apparatus 110 through the transmission buffer 1403 and the I/F driver unit 1404. When acquisition of information about the printing apparatus 110, setting of information, or job control is to be performed through the utility unit 1405 during data transmission, since exclusive control is performed by the I/F driver unit 1404, a request from the utility unit 1405 cannot be satisfied until the above PDL data is completely transmitted. This impairs the real-time performance."(col. 4 lines 13-24).

Thus, it is unclear whether Osada et al. discloses "wherein the control unit comprises: an error inspector, which inspects whether an error has occurred while the intermediate data is converted into the printing data and outputs a result of the inspection as the control signal; and a data loader, which in response to the control signal, loads the intermediate data from the storage unit and outputs the loaded intermediate data to the printer driver" as recited in claim 7.

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 7.

Claim 8 recites "further comprising a spooler loaded with intermediate data from the storage unit and outputting the loaded intermediate data to the printer driver, wherein the printer driver converts the intermediate data received from the spooler into the printing data."

Osada et al. discusses "the rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."(col. 3, lines 12-14).

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 8.

Claims are 9-11 rejected under 35 U.S.C. 101(b) as being anticipated by Osada et al..

Claim 9 has been amended to recite "the intermediate data being Graphic Device Interface(GDI) function in a single enhancement meta file(EMF)."

As such, Osada et al. does not disclose whether the intermediate data is Graphic Device Interface function in a single enhancement meta file."

Further, claim 9 recites "...determining whether an error has occurred while the intermediate data is converted into the printing data..."

Osada et al. discloses "The JL parser unit 1408 analyzes the received data and determines, on the basis of predetermined JL information, whether the data supplied indicates information about the printing apparatus 110 or PDL data, thereby sending the data to the corresponding processing. The PDL translator unit 1409 performs PDL translation processing for

the PDL data sent from the JL parser unit 1408, thereby converting the data into intermediate data as a rendering object suitable for rendering. The device database unit 1413 stores the information about the printing apparatus 110 which is set by the JL and acquires the information by the JL, or supplies it to the PDL translator unit 1409 on the subsequent stage. In this case, environment information indicates, for example, the number of copies. The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed. The rendering unit 1411 generates image data as a bitmap image by actually rendering the rendering object temporarily stored in the application unit 1401. The printer engine unit 1412 receives the bitmap image generated by the rendering unit 1411, and prints it on a medium such as a paper sheet by a known printing technique. The job control language (JL) will be described next. A print data transmission means using the JL will be described first.”(col. 2, line 65 to col. 3, line 24, emphasis added).

As noted above, Osada et al. fails to disclose “determining whether an error has occurred while the intermediate data is converted into the printing data” as recited in claim 9 of the present application.

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 9.

In addition, claims 10-11 are also patentable due at least to their depending from claim 9, as well as for the additional recitations therein.

Claim 12 of the present application recites “determining whether an error has occurred while converting the intermediate data into the printing data.”

Osada et al. discusses “[e]rror flag:”1” indicates that some error has occurred in the printing apparatus 110.”(col. 9, lines 60-63).

Thus, Osada et al. merely discusses some error has occurred in the printing apparatus 110.

Claim 12 has been amended to recite “the intermediate data being Graphic Device Interface(GDI) function in a single enhancement meta file(EMF).”

As such, Osada et al. fails to recite the features as recited in claim 12.

In addition, claim 12 recites “converting the intermediate data into image type data and converting the image type data into the printing data if determined that an error has occurred.”

Osada et al. discusses “Osada et al. discusses “[t]his apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage

means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515).”(col. 20, lines 34-46).

As such, Osada et al. fails to disclose “**converting the intermediate data into image type data and converting the image type data into the printing data if determined that an error has occurred**” as recited in claim 12 of the present application.

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 12.

In addition, claim 13 is patentable due at least to its depending from claim 12, as well as for the additional recitations therein.

Claim 14 recites “the error is a general protection fault type error.”

Osada et al. discusses “[e]rror flag: “1” indicates that some error has occurred in the printing apparatus 110. This flag is added to a replay packet sent from the printing apparatus 110 to the host computer 109.”(col. 9, lines 59-63).

It is noted that “col. 6, lines 1-4” is typo error of “(col. 9, lines 59-63)” at page 16, line 17 of the Office Action.

It is unclear whether Osada et al. discloses “the error is a general protection fault type error” as recited in claim 14.

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 14.

Claim 15 has been amended to recite “the intermediate data being Graphic Device Interface(GDI) function in a single enhancement meta.”

As such, Osada et al. fails to discuss the invention as recited in claim 15.

In addition, claim 15 recites “a control unit determining whether an error has occurred while the intermediate data is converted into the printing data, and in response to the determination, loading the intermediate data from the storage unit to the printer driver...”

Osada et al. discusses “[t]his apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for

generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515).”(col. 20, lines 34-46).

However, Osada et al. does not “determine whether an error has occurred while the intermediate data is converted into the printing data, and in response to the determination, loading the intermediate data from the storage unit to the printer driver” as recited in claim 15.

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 15.

Claim 16 recites “wherein the control unit inspects whether the intermediate data has been completely converted into the printing data by the printer driver, and outputs a result of the inspection as a conversion signal to the printer driver, and the printer driver converts the intermediate data into the printing data in response to the conversion signal.”

Osada et al. discloses “The JL parser unit 1408 analyzes the received data and determines, on the basis of predetermined JL information, whether the data supplied indicates information about the printing apparatus 110 or PDL data, thereby sending the data to the corresponding processing. The PDL translator unit 1409 performs PDL translation processing for the PDL data sent from the JL parser unit 1408, thereby converting the data into intermediate data as a rendering object suitable for rendering. The device database unit 1413 stores the information about the printing apparatus 110 which is set by the JL and acquires the information by the JL, or supplies it to the PDL translator unit 1409 on the subsequent stage. In this case, environment information indicates, for example, the number of copies. The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed. The rendering unit 1411 generates image data as a bitmap image by actually rendering the rendering object temporarily stored in the application unit 1401. The printer engine unit 1412 receives the bitmap image generated by the rendering unit 1411, and prints it on a medium such as a paper sheet by a known printing technique. The job control language (JL) will be described next. A print data transmission means using the JL will be described first.”(col. 2, line 65 to col. 3, line 24-emphasis added).

Thus, Osada et al. fails to disclose the invention as recited in claim 16.

Claim 17 recites “an error inspector which inspects whether an error has occurred while the intermediate data is converted into the printing data and outputs a result of the inspection as a control signal...”

Osada et al. discusses “In addition, the print data generated by the application unit 1401 of the host computer 109 is converted into PDL data by the printer driver unit 1402 and is transmitted

to the printing apparatus 110 through the transmission buffer 1403 and the I/F driver unit 1404. When acquisition of information about the printing apparatus 110, setting of information, or job control is to be performed through the utility unit 1405 during data transmission, since exclusive control is performed by the I/F driver unit 1404, a request from the utility unit 1405 cannot be satisfied until the above PDL data is completely transmitted. This impairs the real-time performance.”(col. 4 lines 13-24).

As such, it is unclear Osada et al. disclose “a control unit inspecting whether an error has occurred while the intermediate data is converted into the printing data, outputting a result of the inspection as the control signal, and in response to the control signal, loading the intermediate data from the storage unit and outputting the loaded intermediate data to the printer driver” as recited in claim 17.

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 17.

In addition, claim 18 is patentable due at least to its depending from claim 15, as well as for the additional recitations therein.

Claim 19 has been amended to recite “, the intermediate data being Graphic Device Interface(GDI) function in a single enhancement meta.”

As such, Osada et al. fails to disclose the invention recited in claim 19.

In addition, claim 19 recites “a printer driver converting the intermediate data into image type data and then converting the image type data into printing data in response to a control signal...”

Osada et al. discusses “[t]his apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515).”(col. 20, lines 34-46).

As such, Osada et al. fails to disclose “a printer driver converting the intermediate data into image type data and then converting the image type data into printing data in response to a control signal” as recited in claim 19.

Accordingly, it is respectfully submitted that Osada et al. does not disclose the invention as recited in claim 19.

In addition, claim 20 is patentable due at least to its depending from claim 19, as well as for the additional recitations therein.

CONCLUSION:

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters. If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date:

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By:



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